CLAIMS

We claim:

1. The boost bridge amplifier characterized in that,
a power supply (1) is connected to mono- or poly-phase load (5),
said load (5) is connected to the appropriate switching bridge (3), and
said switching bridge (3) is connected to a bridge capacitor (6).

2. The mono-phase boost bridge amplifier of claim 1, wherein
the first node of said power supply (1) is connected to the first node of the first phase (51) of said load (5),
the second node of said power supply (1) is connected to the second node of said switching bridge (3) and the second node of said bridge capacitor (6),
the first node of said bridge capacitor (6) is connected to the first node of said switching bridge (3),
the second node of the first phase (51) of said load (5) is connected to the third node of said switching bridge (3),
the first active switch (31) of said switching bridge (3) is connected between the first and third nodes of said switching bridge (3),
the first diode (71) anode is connected to the third node of said switching bridge (3), and the first diode (71) cathode is connected to the first node of said switching bridge (3),
the second active switch (32) of said switching bridge (3) is connected between the third and second nodes of said switching bridge (3), and
the second diode (72) anode is connected to the second node of said switching bridge (3), and the second diode (72) cathode is connected to the third node of said switching bridge (3).

3. The two-phase boost bridge amplifier of claim 1, wherein
the first node of said power supply (1) is connected to the first node of the first phase (51) of said load (5) and the first node of the second phase (52) of said load (5),
the second node of said power supply (1) is connected to the second node of said switching bridge (3) and the second node of said bridge capacitor (6),
the first node of said bridge capacitor (6) is connected to the first node of said switching bridge (3).

the second node of the first phase (51) of said load (5) is connected to the third node of said switching bridge (3),

the second node of the second phase (52) of said load (5) is connected to the fourth node of said switching bridge (3),

the first active switch (31) of said switching bridge (3) is connected between the first and third nodes of said switching bridge (3),

the first diode (71) anode is connected to the third node of said switching bridge (3), and the first diode (71) cathode is connected to the first node of said switching bridge (3),

the second active switch (32) of said switching bridge (3) is connected between the third and second nodes of said switching bridge (3),

the second diode (72) anode is connected to the second node of said switching bridge (3). and the second diode (72) cathode is connected to the third node of said switching bridge (3),

the third active switch (33) of said switching bridge (3) is connected between the first and fourth nodes of said switching bridge (3),

the third diode (73) anode is connected to the fourth node of said switching bridge (3), and the third diode (73) cathode is connected to the first node of said switching bridge (3),

the fourth active switch (34) of said switching bridge (3) is connected between the fourth and second nodes of said switching bridge (3), and

the fourth diode (74) anode is connected to the second node of said switching bridge (3). and the fourth diode (74) cathode is connected to the fourth node of said switching bridge (3).

4. The three-phase boost bridge amplifier of claim 1, wherein

the first node of said power supply (1) is connected to the first node of the first phase (51) of said load (5), the first node of the second phase (52) of said load (5), and the first node of the third phase (53) of said load (5),

the second node of said power supply (1) is connected to the second node of said switching bridge (3) and the second node of said bridge capacitor (6),

the first node of said bridge capacitor (6) is connected to the first node of said switching bridge (3).

the second node of the first phase (51) of said load (5) is connected to the third node of said switching bridge (3),

the second node of the second phase (52) of said load (5) is connected to the fourth node of said switching bridge (3),

the second node of the third phase (53) of said load (5) is connected to the fifth node of said switching bridge (3),

the first active switch (31) of said switching bridge (3) is connected between the first and third nodes of said switching bridge (3),

the first diode (71) anode is connected to the third node of said switching bridge (3), and the first diode (71) cathode is connected to the first node of said switching bridge (3),

the second active switch (32) of said switching bridge (3) is connected between the third and second nodes of said switching bridge (3),

the second diode (72) anode is connected to the second node of said switching bridge (3), and the second diode (72) cathode is connected to the third node of said switching bridge (3),

the third active switch (33) of said switching bridge (3) is connected between the first and fourth nodes of said switching bridge (3),

the third diode (73) anode is connected to the fourth node of said switching bridge (3), and the third diode (73) cathode is connected to the first node of said switching bridge (3),

the fourth active switch (34) of said switching bridge (3) is connected between the fourth and second nodes of said switching bridge (3),

the fourth diode (74) anode is connected to the second node of said switching bridge (3), and the fourth diode (74) cathode is connected to the fourth node of said switching bridge (3),

the fifth active switch (35) of said switching bridge (3) is connected between the first and fifth nodes of said switching bridge (3),

the fifth diode (75) anode is connected to the fifth node of said switching bridge (3), and the fifth diode (75) cathode is connected to the first node of said switching bridge (3),

the sixth active switch (36) of said switching bridge (3) is connected between the fifth and second nodes of said switching bridge (3), and

the sixth diode (76) anode is connected to the second node of said switching bridge (3), and the sixth diode (76) cathode is connected to the fifth node of said switching bridge (3).

5. The boost bridge amplifier characterized in that,

a power supply (1) is connected to mono- or poly-phase load (5),

said load (5) is connected to the appropriate output filter (4),

said output filter (4) is connected to the appropriate switching bridge (3), and

said switching bridge (3) is connected to a bridge capacitor (6).

6. The mono-phase boost bridge amplifier of claim 5, wherein

the first node of said power supply (1) is connected to the first node of first phase (51) of said load (5),

the second node of said power supply (1) is connected to the second node of said switching bridge (3) and the second node of said bridge capacitor (6),

the first node of said bridge capacitor (6) is connected to the first node of said switching bridge (3),

the second node of the first phase (51) of said load (5) is connected to the first node of first filtering inductor (41),

the second node of first filtering inductor (41) is connected to the third node of said switching bridge (3),

the first active switch (31) of said switching bridge (3) is connected between the first and third nodes of said switching bridge (3),

the first diode (71) anode is connected to the third node of said switching bridge (3), and the first diode (71) cathode is connected to the first node of said switching bridge (3),

the second active switch (32) of said switching bridge (3) is connected between the third and second nodes of said switching bridge (3), and

the second diode (72) anode is connected to the second node of said switching bridge (3), and the second diode (72) cathode is connected to the third node of said switching bridge (3).

7. The two-phase boost bridge amplifier of claim 5, wherein

the first node of said power supply (1) is connected to the first node of first phase (51) of said load (5) and the first node of the second phase (52) of said load (5),

the second node of said power supply (1) is connected to the second node of said switching bridge (3) and the second node of said bridge capacitor (6),

the first node of said bridge capacitor (6) is connected to the first node of said switching bridge (3),

the second node of first phase (51) of said load (5) is connected to the first node of the first filtering inductor (41),

the second node of the first filtering inductor (41) is connected to the third node of said switching bridge (3),

the second node of the second phase (52) of said load (5) is connected to the first node of the second filtering inductor (42),

the second node of the second filtering inductor (42) is connected to the fourth node of said switching bridge (3),

the first active switch (31) of said switching bridge (3) is connected between the first and third nodes of said switching bridge (3),

the first diode (71) anode is connected to the third node of said switching bridge (3), and the first diode (71) cathode is connected to the first node of said switching bridge (3),

the second active switch (32) of said switching bridge (3) is connected between the third and second nodes of said switching bridge (3),

the second diode (72) anode is connected to the second node of said switching bridge (3), and the second diode (72) cathode is connected to the third node of said switching bridge (3),

the third active switch (33) of said switching bridge (3) is connected between the first and fourth nodes of said switching bridge (3),

the third diode (73) anode is connected to the fourth node of said switching bridge (3), and the third diode (73) cathode is connected to the first node of said switching bridge (3),

the fourth active switch (34) of said switching bridge (3) is connected between the fourth and second nodes of said switching bridge (3), and

the fourth diode (74) anode is connected to the second node of said switching bridge (3), and the fourth diode (74) cathode is connected to the fourth node of said switching bridge (3).

8. The three-phase boost bridge amplifier of claim 5, wherein

the first node of said power supply (1) is connected to the first node of the first phase (51) of said load (5), the first node of the second phase (52) of said load (5), and the first node of the third phase (53) of said load (5),

the second node of said power supply (1) is connected to the second node of said switching bridge (3) and the second node of said bridge capacitor (6),

the first node of said bridge capacitor (6) is connected to the first node of said switching bridge (3),

the second node of the first phase (51) of said load (5) is connected to the first node of the first filtering inductor (41),

the second node of the first filtering inductor (41) is connected to the third node of said switching bridge (3),

the second node of the second phase (52) of said load (5) is connected to the first node of the second filtering inductor (42),

the second node of the second filtering inductor (42) is connected to the fourth node of said switching bridge (3),

the second node of the third phase (53) of said load (5) is connected to the first node of the third filtering inductor (43),

the second node of the third filtering inductor (43) is connected to the fifth node of said switching bridge (3),

the first active switch (31) of said switching bridge (3) is connected between the first and third nodes of said switching bridge (3),

the first diode (71) anode is connected to the third node of said switching bridge (3), and the first diode (71) cathode is connected to the first node of said switching bridge (3),

the second active switch (32) of said switching bridge (3) is connected between the third and second nodes of said switching bridge (3),

the second diode (72) anode is connected to the second node of said switching bridge (3), and the second diode (72) cathode is connected to the third node of said switching bridge (3),

the third active switch (33) of said switching bridge (3) is connected between the first and fourth nodes of said switching bridge (3),

the third diode (73) anode is connected to the fourth node of said switching bridge (3), and the third diode (73) cathode is connected to the first node of said switching bridge (3),

the fourth active switch (34) of said switching bridge (3) is connected between the fourth and second nodes of said switching bridge (3),

the fourth diode (74) anode is connected to the second node of said switching bridge (3), and the fourth diode (74) cathode is connected to the fourth node of said switching bridge (3),

the fifth active switch (35) of said switching bridge (3) is connected between the first and fifth nodes of said switching bridge (3),

the fifth diode (75) anode is connected to the fifth node of said switching bridge (3), and the fifth diode (75) cathode is connected to the first node of said switching bridge (3),

the sixth active switch (36) of said switching bridge (3) is connected between the fifth and second nodes of said switching bridge (3), and

the sixth diode (76) anode is connected to the second node of said switching bridge (3), and the sixth diode (76) cathode is connected to the fifth node of said switching bridge (3).

9. The boost bridge amplifier characterized in that,

a power supply (1) is connected to mono- or poly-phase load (5) and a bridge capacitor (6),

said load (5) is connected to the appropriate switching bridge (3), and

said switching bridge (3) is connected to said bridge capacitor (6).

10. The mono-phase boost bridge amplifier of claim 9, wherein

the first node of said power supply (1) is connected to the first node of the first phase (51) of said load (5) and the second node of said bridge capacitor (6),

the second node of said power supply (1) is connected to the second node of said switching bridge (3),

the first node of said bridge capacitor (6) is connected to the first node of said switching bridge (3),

the second node of the first phase (51) of said load (5) is connected to the third node of said switching bridge (3),

the first active switch (31) of said switching bridge (3) is connected between the first and third nodes of said switching bridge (3),

the first diode (71) anode is connected to the third node of said switching bridge (3), and the first diode (71) cathode is connected to the first node of said switching bridge (3),

the second active switch (32) of said switching bridge (3) is connected between the third and second nodes of said switching bridge (3), and

the second diode (72) anode is connected to the second node of said switching bridge (3), and the second diode (72) cathode is connected to the third node of said switching bridge (3).

11. The two-phase boost bridge amplifier of claim 9, wherein

the first node of said power supply (1) is connected to the first node of the first phase (51) of said load (5), the first node of the second phase (52) of said load (5) and the second node of said bridge capacitor (6),

the second node of said power supply (1) is connected to the second node of said switching bridge (3),

the first node of said bridge capacitor (6) is connected to the first node of said switching bridge (3),

the second node of the first phase (51) of said load (5) is connected to the third node of said switching bridge (3),

the second node of the second phase (52) of said load (5) is connected to the fourth node of said switching bridge (3),

the first active switch (31) of said switching bridge (3) is connected between the first and third nodes of said switching bridge (3),

the first diode (71) anode is connected to the third node of said switching bridge (3), and the first diode (71) cathode is connected to the first node of said switching bridge (3),

the second active switch (32) of said switching bridge (3) is connected between the third and second nodes of said switching bridge (3),

the second diode (72) anode is connected to the second node of said switching bridge (3), and the second diode (72) cathode is connected to the third node of said switching bridge (3),

the third active switch (33) of said switching bridge (3) is connected between the first and fourth nodes of said switching bridge (3),

the third diode (73) anode is connected to the fourth node of said switching bridge (3), and the third diode (73) cathode is connected to the first node of said switching bridge (3),

the fourth active switch (34) of said switching bridge (3) is connected between the fourth and second nodes of said switching bridge (3), and

the fourth diode (74) anode is connected to the second node of said switching bridge (3), and the fourth diode (74) cathode is connected to the fourth node of said switching bridge (3).

12. The three-phase boost bridge amplifier of claim 9, wherein

the first node of said power supply (1) is connected to the first node of the first phase (51) of said load (5), the first node of the second phase (52) of said load (5), the first node of the third phase (53) of said load (5), and the second node of said bridge capacitor (6),

the second node of said power supply (1) is connected to the second node of said switching bridge (3),

the first node of said bridge capacitor (6) is connected to the first node of said switching bridge (3),

the second node of the first phase (51) of said load (5) is connected to the third node of said switching bridge (3),

the second node of the second phase (52) of said load (5) is connected to the fourth node of said switching bridge (3),

the second node of the third phase (53) of said load (5) is connected to the fifth node of said switching bridge (3),

the first active switch (31) of said switching bridge (3) is connected between the first and third nodes of said switching bridge (3),

the first diode (71) anode is connected to the third node of said switching bridge (3), and the first diode (71) cathode is connected to the first node of said switching bridge (3),

the second active switch (32) of said switching bridge (3) is connected between the third and second nodes of said switching bridge (3),

the second diode (72) anode is connected to the second node of said switching bridge (3), and the second diode (72) cathode is connected to the third node of said switching bridge (3),

the third active switch (33) of said switching bridge (3) is connected between the first and fourth nodes of said switching bridge (3),

the third diode (73) anode is connected to the fourth node of said switching bridge (3), and the third diode (73) cathode is connected to the first node of said switching bridge (3),

the fourth active switch (34) of said switching bridge (3) is connected between the fourth and second nodes of said switching bridge (3),

the fourth diode (74) anode is connected to the second node of said switching bridge (3), and the fourth diode (74) cathode is connected to the fourth node of said switching bridge (3),

the fifth active switch (35) of said switching bridge (3) is connected between the first and fifth nodes of said switching bridge (3),

the fifth diode (75) anode is connected to the fifth node of said switching bridge (3), and the fifth diode (75) cathode is connected to the first node of said switching bridge (3),

the sixth active switch (36) of said switching bridge (3) is connected between the fifth and second nodes of said switching bridge (3), and

the sixth diode (76) anode is connected to the second node of said switching bridge (3), and the sixth diode (76) cathode is connected to the fifth node of said switching bridge (3).

13. The mono-phase boost bridge amplifier of claims 5 and 6, wherein

the first node of the first filtering inductor (41) is connected to the first node of the first filtering capacitor (81), and

the second node of said bridge capacitor (6) is connected to the second node of the first filtering capacitor (81).

14. The two-phase boost bridge amplifier of claims 5 and 7, wherein

the first node of the first filtering inductor (41) is connected to the first node of the first filtering capacitor (81),

the second node of said bridge capacitor (6) is connected to the second node of the first filtering capacitor (81),

the first node of the second filtering inductor (42) is connected to the first node of the second filtering capacitor (82), and

the second node of said bridge capacitor (6) is connected to the second node of the second filtering capacitor (82).

15. The three-phase boost bridge amplifier of claims 5 and 8, wherein

the first node of the first filtering inductor (41) is connected to the first node of the first filtering capacitor (81),

the second node of said bridge capacitor (6) is connected to the second node of the first filtering capacitor (81),

the first node of the second filtering inductor (42) is connected to the first node of the second filtering capacitor (82),

the second node of said bridge capacitor (6) is connected to the second node of the second filtering capacitor (82),

the first node of the third filtering inductor (43) is connected to the first node of the third filtering capacitor (83), and

the second node of said bridge capacitor (6) is connected to the second node of the third filtering capacitor (83).

16. The two-phase boost bridge amplifier of claims 1, 3, 5, 7, 9, 11 and 14, wherein

the third node of said switching bridge (3) is connected to the first node of filtering capacitor (91),

the second node of filtering capacitor (91) is connected to the first node of an additional load (92), and

the second node of said additional load (92) is connected to the fourth node of said switching bridge (3).

17. The mono-phase boost bridge amplifier of claims 1 and 2, wherein

the second node of said power supply (1) is connected to the first node of the first phase (51) of said load (5),

the first node of said power supply (1) is connected to the first node of said switching bridge (3) and the first node of said bridge capacitor (6), and

the second node of said bridge capacitor (6) is connected to the second node of said switching bridge (3).

18. The two-phase boost bridge amplifier of claims 1 and 3, wherein

the second node of said power supply (1) is connected to the first node of the first phase (51) of said load (5) and the first node of the second phase (52) of said load (5),

the first node of said power supply (1) is connected to the first node of said switching bridge (3) and the first node of said bridge capacitor (6), and

the second node of said bridge capacitor (6) is connected to the second node of said switching bridge (3).

19. The three-phase boost bridge amplifier of claims 1 and 4, wherein

the second node of said power supply (1) is connected to the first node of the first phase (51) of said load (5), the first node of the second phase (52) of said load (5), and the first node of the third phase (53) of said load (5),

the first node of said power supply (1) is connected to the first node of said switching bridge (3) and the first node of said bridge capacitor (6), and

the second node of said bridge capacitor (6) is connected to the second node of said switching bridge (3).

20. The mono-phase boost bridge amplifier of claims 5 and 6, wherein

the second node of said power supply (1) is connected to the first node of the first phase (51) of said load (5),

the first node of said power supply (1) is connected to the first node of said switching bridge (3) and the first node of said bridge capacitor (6), and

the second node of said bridge capacitor (6) is connected to the second node of said switching bridge (3).

21. The two-phase boost bridge amplifier of claims 5 and 7, wherein

the second node of said power supply (1) is connected to the first node of the first phase (51) of said load (5) and the first node of the second phase (52) of said load (5),

the first node of said power supply (1) is connected to the first node of said switching bridge (3) and the first node of said bridge capacitor (6), and

the second node of said bridge capacitor (6) is connected to the second node of said switching bridge (3).

22. The three-phase boost bridge amplifier of claims 5 and 8, wherein

the second node of said power supply (1) is connected to the first node of the first phase (51) of said load (5), the first node of the second phase (52) of said load (5), and the first node of the third phase (53) of said load (5),

the first node of said power supply (1) is connected to the first node of said switching bridge (3) and the first node of said bridge capacitor (6), and

the second node of said bridge capacitor (6) is connected to the second node of said switching bridge (3).

23. The mono-phase boost bridge amplifier of claims 9 and 10, wherein

the second node of said power supply (1) is connected to the first node of the first phase (51) of said load (5) and the first node of said bridge capacitor (6),

the first node of said power supply (1) is connected to the first node of said switching bridge (3), and

the second node of said bridge capacitor (6) is connected to the second node of said switching bridge (3).

24. The two-phase boost bridge amplifier of claims 9 and 11, wherein

the second node of said power supply (1) is connected to the first node of the first phase (51) of said load (5), the first node of the second phase (52) of said load (5) and the first node of said bridge capacitor (6),

the first node of said power supply (1) is connected to the first node of said switching bridge (3), and

the second node of said bridge capacitor (6) is connected to the second node of said switching bridge (3).

25. The three-phase boost bridge amplifier of claims 9 and 12, wherein

the second node of the said power supply (1) is connected to the first node of the first phase (51) of said load (5), the first node of the second phase (52) of said load (5), the first node of the third phase (53) of said load (5) and the first node of said bridge capacitor (6),

the first node of the said power supply (1) is connected to the first node of said switching bridge (3), and

the second node of said bridge capacitor (6) is connected to the second node of said switching bridge (3).

26. The mono-phase boost bridge amplifier of claims 5, 6 and 20, wherein

the first node of the first filtering inductor (41) is connected to the first node of the first filtering capacitor (81), and

the first node of said bridge capacitor (6) is connected to the second node of the first filtering capacitor (81).

27. The two-phase boost bridge amplifier of claims 5, 7 and 21, wherein

the first node of the first filtering inductor (41) is connected to the first node of the first filtering capacitor (81).

the first node of said bridge capacitor (6) is connected to the second node of the first filtering capacitor (81).

the first node of the second filtering inductor (42) is connected to the first node of the second filtering capacitor (82), and

the first node of said bridge capacitor (6) is connected to the second node of the second filtering capacitor (82).

28. The three-phase boost bridge amplifier of claims 5, 8 and 22, wherein

the first node of the first filtering inductor (41) is connected to the first node of the first filtering capacitor (81),

the first node of said bridge capacitor (6) is connected to the second node of the first filtering capacitor (81),

the first node of the second filtering inductor (42) is connected to the first node of the second filtering capacitor (82),

the first node of said bridge capacitor (6) is connected to the second node of the second filtering capacitor (82),

the first node of the third filtering inductor (43) is connected to the first node of the third filtering capacitor (83), and

the first node of said bridge capacitor (6) is connected to the second node of the third filtering capacitor (83).

29. The two-phase boost bridge amplifier of claims 1, 3, 5, 7, 9, 11, 14, 18, 21, 24 and 27, wherein

the third node of said switching bridge (3) is connected to the first node of the filtering capacitor (91),

the second node of said filtering capacitor (91) is connected to the first node of an additional load (92), and

the second node of said additional load (92) is connected to the fourth node of said switching bridge (3).

30. The boost bridge amplifier of claims 1, 3, 5, 7, 9, 11, 14, 16, 18, 21, 24, 27 and 29, wherein load (5) is a dual voice coil loudspeaker.

31. The boost bridge amplifier of claims 1, 4, 5, 8, 9, 12, 15, 19, 22, 25 and 28, wherein load (5) is a three-phase electric motor.

32. The boost bridge amplifier of claims 2 to 4, 6 to 8, 10 to 31, wherein all active switches are semiconductor switches, such as mosfets, IGBT, bipolar transistors or MCT.

AMENDED CLAIMS

[received by the International Bureau on 20 November 2000 (20.11.00); original claims 1, 5 and 9 amended; other claims unchanged (7 pages)]

We claim:

1. The boost bridge amplifier comprising:

a power supply (1), having the first and the second node,

a mono- or poly-phase load (5), having the first and the second node per each phase,

a switching bridge (3), having the first and the second node, common for all phases, and an output node per each phase,

a bridge capacitor (6), having the first and the second node,

characterized in that,

the first node of said power supply (1) is connected to the first node of each phase of said load (5),

the second node of said power supply (1) is connected to the second node of said switching bridge (3) and the second node of said bridge capacitor (6),

the first node of said bridge capacitor (6) is connected to the first node of said switching bridge (3), and

the second node of each phase of said load (5) is connected to the output node of the appropriate phase of said switching bridge (3).

2. The mono-phase boost bridge amplifier of claim 1, wherein

the first node of said power supply (1) is connected to the first node of the first phase (51) of said load (5),

the second node of said power supply (1) is connected to the second node of said switching bridge (3) and the second node of said bridge capacitor (6),

the first node of said bridge capacitor (6) is connected to the first node of said switching bridge (3),

the second node of the first phase (51) of said load (5) is connected to the third node of said switching bridge (3),

the first active switch (31) of said switching bridge (3) is connected between the first and the third node of said switching bridge (3),

the first diode (71) anode is connected to the third node of said switching bridge (3), and the first diode (71) cathode is connected to the first node of said switching bridge (3),

the second active switch (32) of said switching bridge (3) is connected between the third and the second node of said switching bridge (3), and

the second diode (72) anode is connected to the second node of said switching bridge (3), and the second diode (72) cathode is connected to the third node of said switching bridge (3).

3. The two-phase boost bridge amplifier of claim 1, wherein

the first node of said power supply (1) is connected to the first node of the first phase (51) of said load (5) and the first node of the second phase (52) of said load (5),

the second node of said power supply (1) is connected to the second node of said switching bridge (3) and the second node of said bridge capacitor (6),

the first node of said bridge capacitor (6) is connected to the first node of said switching bridge (3),

the second node of the second phase (52) of said load (5) is connected to the fourth node of said switching bridge (3),

the second node of the third phase (53) of said load (5) is connected to the fifth node of said switching bridge (3),

the first active switch (31) of said switching bridge (3) is connected between the first and the third node of said switching bridge (3),

the first diode (71) anode is connected to the third node of said switching bridge (3), and the first diode (71) cathode is connected to the first node of said switching bridge (3),

the second active switch (32) of said switching bridge (3) is connected between the third and the second node of said switching bridge (3),

the second diode (72) anode is connected to the second node of said switching bridge (3), and the second diode (72) cathode is connected to the third node of said switching bridge (3),

the third active switch (33) of said switching bridge (3) is connected between the first and the fourth node of said switching bridge (3),

the third diode (73) anode is connected to the fourth node of said switching bridge (3), and the third diode (73) cathode is connected to the first node of said switching bridge (3),

the fourth active switch (34) of said switching bridge (3) is connected between the fourth and the second node of said switching bridge (3),

the fourth diode (74) anode is connected to the second node of said switching bridge (3), and the fourth diode (74) cathode is connected to the fourth node of said switching bridge (3),

the fifth active switch (35) of said switching bridge (3) is connected between the first and the fifth node of said switching bridge (3),

the fifth diode (75) anode is connected to the fifth node of said switching bridge (3), and the fifth diode (75) cathode is connected to the first node of said switching bridge (3),

the sixth active switch (36) of said switching bridge (3) is connected between the fifth and the second node of said switching bridge (3), and

the sixth diode (76) anode is connected to the second node of said switching bridge (3), and the sixth diode (76) cathode is connected to the fifth node of said switching bridge (3).

5. The boost bridge amplifier comprising:

a power supply (1), having the first and the second node,

a mono- or poly-phase load (5), having the first and the second node per each phase,

an output filter (4), having the first and the second node per each phase,

a switching bridge (3), having the first and the second node, common for all phases, and an output node per each phase,

a bridge capacitor (6), having the first and the second node,

characterized in that,

the first node of said power supply (1) is connected to the first node of each phase of said load (5),

the second node of said power supply (1) is connected to the second node of said switching bridge (3) and the second node of said bridge capacitor (6),

the first node of said bridge capacitor (6) is connected to the first node of said switching bridge (3),

the second node of each phase of said load (5) is connected to the first node of the appropriate phase of said output filter (4), and

the second node of each phase of said output filter (4) is connected to the output node of the appropriate phase of said switching bridge (3).

6. The mono-phase boost bridge amplifier of claim 5, wherein

the first node of said power supply (1) is connected to the first node of first phase (51) of said load (5),

the second node of said power supply (1) is connected to the second node of said switching bridge (3) and the second node of said bridge capacitor (6),

the first node of said bridge capacitor (6) is connected to the first node of said switching bridge (3),

the second node of the first phase (51) of said load (5) is connected to the first node of first filtering inductor (41),

the second node of first filtering inductor (41) is connected to the third node of said switching bridge (3),

the first active switch (31) of said switching bridge (3) is connected between the first and the third node of said switching bridge (3),

the first diode (71) anode is connected to the third node of said switching bridge (3), and the first diode (71) cathode is connected to the first node of said switching bridge (3),

the second active switch (32) of said switching bridge (3) is connected between the third and the second node of said switching bridge (3), and

the second diode (72) anode is connected to the second node of said switching bridge (3), and the second diode (72) cathode is connected to the third node of said switching bridge (3).

7. The two-phase boost bridge amplifier of claim 5, wherein

the first node of said power supply (1) is connected to the first node of first phase (51) of said load (5) and the first node of the second phase (52) of said load (5),

the second node of said power supply (1) is connected to the second node of said switching bridge (3) and the second node of said bridge capacitor (6),

the first node of said bridge capacitor (6) is connected to the first node of said switching bridge (3),

the second node of first phase (51) of said load (5) is connected to the first node of the first filtering inductor (41),

the sixth active switch (36) of said switching bridge (3) is connected between the fifth and the second node of said switching bridge (3), and

the sixth diode (76) anode is connected to the second node of said switching bridge (3), and the sixth diode (76) cathode is connected to the fifth node of said switching bridge (3).

9. The boost bridge amplifier comprising,

a power supply (1), having the first and the second node,

a mono- or poly-phase load (5), having the first and the second node per each phase,

a switching bridge (3), having the first and the second node, common for all phases, and an output node per each phase,

a bridge capacitor (6), having the first and the second node,

characterized in that,

the first node of said power supply (1) is connected to the first node of each phase of said load (5) and the second node of said bridge capacitor (6),

the second node of said power supply (1) is connected to the second node of said switching bridge (3),

the first node of said bridge capacitor (6) is connected to the first node of said switching bridge (3), and

the second node of each phase of said load (5) is connected to the output node of the appropriate phase of said switching bridge (3).

10. The mono-phase boost bridge amplifier of claim 9, wherein

the first node of said power supply (1) is connected to the first node of the first phase (51) of said load (5) and the second node of said bridge capacitor (6),

the second node of said power supply (1) is connected to the second node of said switching bridge (3),

the first node of said bridge capacitor (6) is connected to the first node of said switching bridge (3),

the second node of the first phase (51) of said load (5) is connected to the third node of said switching bridge (3),

the first active switch (31) of said switching bridge (3) is connected between the first and the third node of said switching bridge (3),

the first diode (71) anode is connected to the third node of said switching bridge (3), and the first diode (71) cathode is connected to th first node of said switching bridge (3),

the second active switch (32) of said switching bridge (3) is connected between the third and the second node of said switching bridge (3), and

the second diode (72) anode is connected to the second node of said switching bridge (3), and the second diode (72) cathode is connected to the third node of said switching bridge (3).

11. The two-phase boost bridge amplifier of claim 9, wherein

the first node of said power supply (1) is connected to the first node of the first phase (51) of said load (5), the first node of the second phase (52) of said load (5) and the second node of said bridge capacitor (6),

THE STATEMENT UNDER ARTICLE 19(1) FOR THE AMENDMENT OF CLAIM 1

The claim 1 is amended in order to meet the objection raised in the International Search Report. The amended claim 1 does not add new subject matter, which goes beyond the disclosure of the international application as filed. On the contrary, the amended claim 1 restricts the claim 1 as filed by describing interconnections in more details. The subject matter of amended claim 1 is fully covered by the description and the drawings as filed.

THE STATEMENT UNDER ARTICLE 19(1) FOR THE AMENDMENT OF CLAIM 5

The claim 5 is amended in order to meet the objection raised in the International Search Report. Amended claim 5 does not add new subject matter, which goes beyond the disclosure of the international application as filed. On the contrary, the amended claim 5 restricts the claim 5 as filed by describing interconnections in more details. The subject matter of amended claim 5 is fully covered by the description and the drawings as filed.

STATEMENT UNDER ARTICLE 19(1) FOR THE AMENDMENT OF CLAIM 9

The claim 9 is amended in order to meet the objection raised in the International Search Report. Amended claim 9 does not add new subject matter, which goes beyond the disclosure of the international application as filed. On the contrary, the amended claim 9 restricts the claim 9 as filed by describing interconnections in more details. The subject matter of amended claim 9 is fully covered by the description and the drawings as filed.